HIV Infection Risk Factors Among Male-to-Female Transgender Persons: A Review of the Literature

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Male-to-female (MTF) transgender women experience a host of psychosocial issues such as discrimination, stigmatization, and marginalization. These challenges often limit economic opportunities, affect mental health, and may place members of this population at an increased risk for HIV infection. This report presents a review of the literature that focuses on risk factors for HIV infection specific to the MTF population. Factors including needle sharing and substance abuse, high-risk sexual behaviors, commercial sex work, health care access, lack of knowledge regarding HIV transmission, violence, stigma and discrimination, and mental health issues have been identified in the literature as risk factors for the acquisition of HIV infection by members of this population. Implications for care provided to MTF transgender persons are presented, and suggestions for future research are identified.

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Transgender persons experience a variety of psychosocial challenges including discrimination, stigmatization, and marginalization from society. In addition, the gay, lesbian, and bisexual community, a community that has also experienced significant discrimination, stigmatization, and marginalization, often tends to shun transgender individuals. These psychosocial challenges affect the employment, education, and housing opportunities for transgender persons (Clements-Nolle, Guzman, & Harris, 2008), impact mental health (Clements-Nolle, Marx, Guzman, & Katz, 2001; Morgan & Stevens, 2008), and render this population at an increased risk for HIV infection (Centers for Disease Control and Prevention [CDC], 2007).

The struggle with gender identity is often a lifelong process for transgender people. Gender identity begins by age 18 months. By this time an individual can differentiate self from the primary caregiver and identify as either male or female. At 2 to 4 years, many children display and participate in cross-gender activities, but these activities quickly disappear by the time the child enters school and gender identity has been firmly established (Sadock & Sadock, 2004). The view of self as male or female does not usually create stress unless the individual's gender identity is incongruent with birth gender. When incongruence occurs and significant distress is present, individuals are said to experience gender identity disorder. Individuals with gender identity disorder experience increased psychological distress as the secondary sexual characteristics associated with puberty occur. At this point, individuals who experience gender identity disorder exhibit a strong and persistent desire to have their biological sex congruent with gender identity and may want to transition from the biological sex to that of the desired gender via cross-dressing, hormone therapy, or surgery, thus becoming

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Table 1. Studies Reported HIV Prevalence Rates Among Male-to-Female Transgender Persons

Study	Study Type	Total Sample Size *N*	Reported Transgender Persons Infected With HIV *n (%)*
Clements-Nolle, Marx, Guzman, & Katz (2001)	Quantitative	392	137 (35%)
Nemoto, Operario, Keatley, Han, & Soma (2004)	Quantitative	332	86 (26%)
Cohan et al. (2006)	Quantitative	78	19 (20%)
Garofalo, Deleon, Osmer, Doll, & Harper (2006)	Quantitative	51	11 (22%)
Nemoto, Operario, & Keatley (2006)	Mixed methods	48	13 (26%)
Edwards, Fisher, & Reynolds (2007)	Quantitative	107	55 (52%)
Clements-Nolle, Guzman, & Harris (2008)	Quantitative	190	71 (37%)
Schulden et al. (2008)	Quantitative	559	67 (12%)

a transgender person (American Psychiatric Association, 2000).

The exact number of transgender persons is not known. Male-to-female (MTF) transgender persons are more common, and much more is known about MTF transgender individuals compared with female to male (FTM) transgender persons (Newfield, Hart, Dibble, & Kohler, 2006). FTM transgender persons are also at risk for HIV infection, but less is known about FTM transgender persons and their unique risk factors for HIV infection (Kenagy & Hsieh, 2005). The purpose of this article is to present a review of the available literature on MTF transgender persons to identify factors that place members of this population at increased risk for HIV infection. Implications for addressing these risk factors and directions for future research among MTF transgender persons are included.

HIV Prevalence in Transgender Persons

Early in the course of the HIV epidemic, the CDC collected data on various populations at risk for HIV including men who have sex with men, injection drug users (IDUs), and various ethnic groups so that prevalence rates of HIV and AIDS in certain populations could be known. However, prevalence rates have not been available for the transgender population. A few studies, however, have attempted to provide prevalence estimates from study samples. Table 1 provides a summary of the studies that have reported HIV prevalence rates among MTF transgender persons. Regardless of the exact prevalence in members of this population, it is generally accepted that MTF transgender persons are at increased risk for HIV infection related to a variety of risk factors (Sausa, Keatley, & Operario, 2007).

HIV Risk Factors

Specific HIV risk factors in the transgender population are well-documented in the literature. Among these risk factors, complex, intertwined relationships exist that make it difficult to ascertain currently how combinations of individual factors place transgender women at risk for HIV infection. In an attempt to illustrate the complexity of HIV risk factors in this population, a schematic depiction of the relationships among factors that have been documented in literature is detailed in Figure 1.

Needle Sharing and Substance Abuse

The relationship between substance abuse and risk for HIV infection has been well established (National Institutes of Drug Abuse [NIDA], 2006). As is common in the general population, many MTF transgender persons use and abuse substances as an escape from

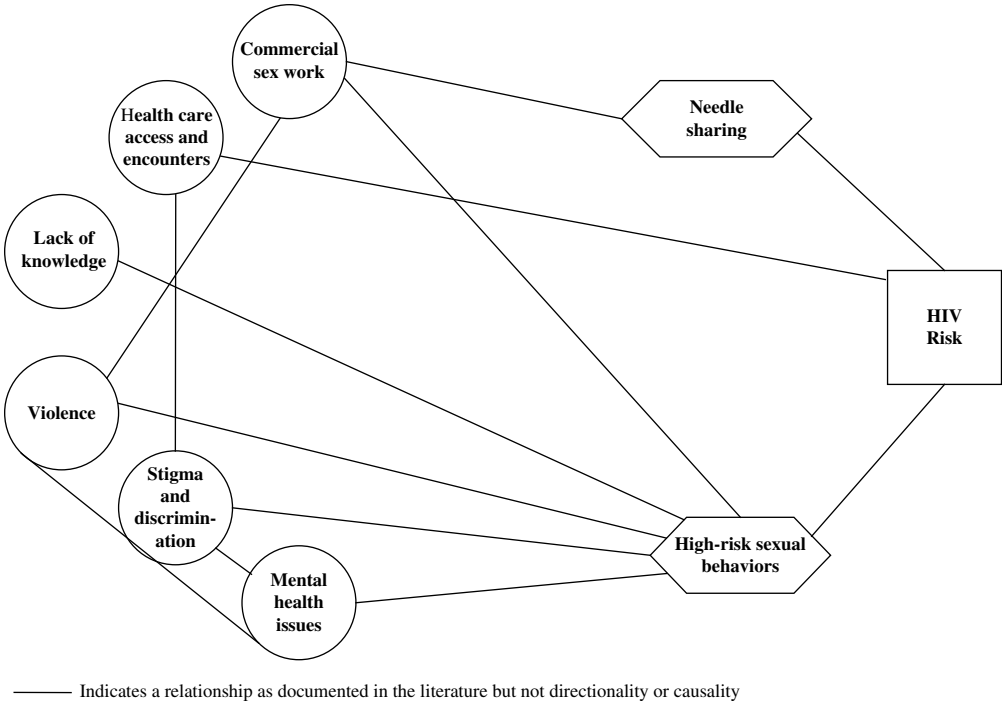

Figure 1. Schematic depiction of the relationships of HIV risk factors in the male-to-female transgender population. NOTE: Lines connecting shapes indicate a relationship as documented in the literature but not directionality or causality.

the pressures of daily living. Substances provide a method for transgender persons to distance themselves from or numb themselves to the stressors associated with living as a transgender person (Sausa et al., 2007).

As was common in the general population during the early years of the HIV epidemic, IDU was one of the major HIV risk factors for MTF transgender persons. In this population, however, needles are also used to administer female hormones and to cosmetically feminize areas of the body with silicone. The injection of hormones is more common than silicone, because female hormones are necessary to maintain the female secondary sex characteristics. Without female hormones, male secondary sex characteristics will reemerge. Many MTF transgender persons lack access to health care or insurance, which results in a lack of access to sterile needles and syringes to inject hormones. Needles are shared for hormone injection and may also be shared during silicone "pumping parties," resulting in needle sharing behavior as a major risk factor for HIV transmission in this population (CDC, 2007).

Although IDU is a major risk factor for HIV transmission (CDC, 2007), the exact prevalence of IDU among this population is not known. Edwards, Fisher, and Reynolds (2007) reported that IDU may not be as high as previously suspected, because early studies on this population collected information on IDU without specifying if the IDU was for illicit drug use or cosmetic purposes.

Once addicted to injected substances such as heroin or methamphetamines, many transgender women resort to high-risk sexual behaviors to obtain illicit substances (Bockting, Robinson, & Rosser, 1998) that may include substance abuse during sexual activity, which may be strongly encouraged by the sexual partner. Alternately, substances may be exchanged for sex (Sausa et al., 2007). In either case, substance use decreases inhibitions, which may result

in participation in high-risk sexual behaviors and subsequently HIV infection (NIDA, 2006).

High-Risk Sexual Behaviors

The majority of new cases of HIV infection in the United States are related to high-risk sexual behaviors (CDC, 2007), and MTF transgender persons are at risk for HIV infection related to sexual behaviors. In fact, a study by Cohan et al. (2006) reported that 44% of the 78 study participants had a history of a sexually transmitted infection (STI). STIs increase the risk for HIV infection because they provide a portal of entry for HIV into the body and increase the number of CD4+ cells that the HIV virus targets for replication (Beck et al., 1996).

Various factors influence high-risk sexual behaviors among members of this population. MTF transgender persons tend to have multiple sexual partners or to be sexually compulsive, which increases STI and HIV exposure risk. Furthermore, MTF transgender persons have often reported that they are uncomfortable using condoms (Bockting et al., 1998).

MTF transgender women are more likely to engage in unprotected anal intercourse (UAI), the sexual behavior with the highest risk for HIV acquisition (Clements-Nolle et al., 2001). In particular, UAI frequently occurs when MTF transgender persons engage in commercial sex work (CSW) (Weinberg, Shaver, & Williams, 1999) because women are able to charge higher rates for unprotected sex. In fact, during financially difficult times, transgender women have reported more high-risk sexual behavior (Sausa et al., 2007). MTF transgender persons who engage in UAI during CSW tend to have low self-esteem, report a history of rape, or use crack cocaine during sexual activity (Clements-Nolle et al., 2008).

Condom negotiation is difficult for MTF transgender women with both primary partners and other sexual partners (Bockting et al., 1998; Nemoto, Operario, Keatley, Han, & Soma, 2004; Sausa et al., 2007). When involved in primary relationships, MTF transgender persons are less likely to use condoms with their primary partners because unprotected sexual behaviors provide a sense of freedom and intimacy. Infatuation, attachment, low self-esteem, and other emotional factors also decrease condom use in primary relationships (Bockting et al., 1998; Nemoto et al., 2004). Many primary partners expect unprotected sexual activity; if a transgender woman attempts to negotiate condom use in these relationships, physical or sexual violence may result (Grossman & D'Augelli, 2006). Individuals already infected with HIV may also participate in unsafe sexual behaviors because of the fear of disclosing HIV status to primary or other sexual partners (Bockting et al., 1998).

As discussed previously, substance abuse during sexual activity is a risk factor for HIV infection (NIDA, 2006). Individuals who abuse substances are less likely to use condoms (Sausa et al., 2007) because alcohol and drug abuse decrease inhibitions and reasoning as reported by members of this population. Transgender women involved in CSW who abuse substances during sexual activity are more likely to abuse intravenous drugs than those who are not involved in CSW (Bockting et al., 1998).

In addition to IDU and high-risk sexual behaviors, other risk factors for HIV infection in the MTF transgender population have been identified. These risk factors include CSW, limited access to health care and negative encounters with health care providers (HCPs), lack of knowledge regarding HIV transmission, violence, stigma and discrimination, and mental health issues.

Other HIV Risk Factors

Commercial sex work. One of the major risk factors for acquisition of HIV and other STIs for MTF transgender persons is CSW. As with HIV infection in this population, it is difficult to ascertain the exact prevalence of CSW in MTF transgender persons, although studies have estimated the prevalence rate to be as high as 44% (Schulden et al., 2008).

Economic necessity is one of the reasons that MTF transgender persons engage in CSW. Many MTF transgender persons come from economically disadvantaged backgrounds. This combination of existing poverty combined with the difficulty finding and securing steady employment leads many MTF transgender persons to CSW. When engaging in CSW, the majority of these women are the receptive partners during UAI, a high-risk sexual behavior. Many report that they engage in UAI not only to please the clients

but also because UAI allows them to feel more feminine (Edwards, Fisher, & Reynolds, 2007).

The reasons for engaging in CSW extend beyond the obvious economic reasons for this population. For many transgender women, participation in CSW is seen as a cultural norm or a rite of passage. CSW allows these women a sense of community and provides social support that they otherwise may lack. For others, CSW allows a sense of independence and self-reliance (Sausa et al., 2007).

For other transgender women, CSW is viewed as both a forced and informed choice. CSW is a forced choice because many MTF transgender persons resort to CSW as a means of survival, whereas at the same time it becomes a method of financing hormone therapy and sex reassignment surgery. In fact, many MTF transgender persons who have steady employment engage in CSW to supplement the income, viewing CSW as a financial safety net (Sausa et al., 2007).

The risk for HIV infection and other STIs is related to exposure to multiple sexual partners. Transgender women engage in sexual behaviors with multiple clients of unknown HIV and STI status (Schulden et al., 2008), have unprotected sex (Clements-Nolle et al., 2008), and are often financially compensated for participation in high-risk sexual activities (Sausa et al., 2007) that increase the risk of HIV and STI acquisition.

Health care access and encounters with health care providers. Health care and health care access are concerns for many clients, but gaining access to and receiving appropriate health care and treatment during health care encounters is a recurrent theme in nearly all of the literature regarding the transgender population. Health care is an issue for MTF transgender persons for a multitude of reasons including verbal abuse, discrimination, insensitivity, and a lack of trust in HCPs, lack of knowledge or education on the part of the HCP, and an overemphasis on HIV infection in the context of transgender health care.

As with all clients, access to health care is essential for health promotion and disease prevention. Many times, transgender clients receive health care at physical locations or environments that also serve gay, lesbian, and bisexual clients. Many transgender persons do not feel comfortable receiving care where gay, lesbian, and bisexual clients receive health care because the health care needs of transgender persons is vastly different from those of other sexual minorities. MTF transgender clients have unique health care needs as evidenced by a study by Nemoto, Operario, and Keatley (2006), which reported that 60% of the study's participants required STI screening and 46% needed psychological counseling.

Many MTF transgender persons have reported that they do not seek health care because of previous experiences of discrimination or blatant verbal abuse by HCPs (Nemoto et al., 2006). In extreme cases, HCPs have reported to clients that they are very uncomfortable providing health care for transgender persons or have refused to provide care altogether. In cases in which HCPs are required to provide care, such as in public clinics, many transgender women have felt patronized or that they were put on display for all HCPs to unnecessarily interview and examine (Dewey, 2008).

Many transgender women have experienced insensitivity from HCPs, especially when seeking health care to obtain hormone therapy (Nemoto et al., 2006). Many transgender women refuse to be tested for HIV infection because of the misconception that HCPs will not prescribe hormones or will not medically clear them for sex reassignment surgery if HIV infection is diagnosed (Bockting et al., 1998). This misconception may result in missed opportunities for early detection of HIV infection in this population. In addition, rejection and insensitivity by HCPs has been reported to increase the risk of suicide in this subpopulation of women (Grossman & D'Augelli, 2004).

Because of previous experiences with verbal abuse, discrimination, or insensitivity, many MTF transgender persons do not trust the health care system or HCPs. This lack of trust impacts the client-provider relationship and results in the client refusing or neglecting to disclose important information to the HCP. For example, because of a lack of trust, many transgender persons who engage in CSW do not disclose this information to HCPs for fear of negative reactions (Cohan et al., 2006). Failure to disclose this pertinent information provides another missed opportunity for HIV testing and STI screening.

Many HCPs are not knowledgeable regarding the health care needs of transgender clients. HCPs lack the knowledge not only to provide gender-specific health care but also to provide sexuality education to transgender persons. If a transgender peer educator is not onsite to provide some of this gender-specific education, health promotion in terms of sexual education is often not provided during health care encounters (Nemoto et al., 2006).

Many transgender persons have reported that health care for the transgender population is overly focused on HIV infection. Although some transgender women recognize that HIV is more prevalent in their community, risk for HIV is only one of the many challenges faced by transgender women. In addition, some of these women do not believe that HCPs can impact the risk of HIV infection in their community because HIV prevention in transgender women is extremely complex. To decrease HIV infection rates or prevent new cases of HIV infection in transgender women, basic needs such as employment, housing, and access to health care must first be addressed. Because these social needs are difficult for HCP to address and are outside of the traditional scope of most health care venues, MTF transgender clients lose trust and confidence in HCP (Garofalo, Deleon, Osmer, Doll, & Harper, 2006).

Conversely, some transgender women have reported positive aspects of interactions with HCPs. Many use this contact as a time to educate HCPs. Once educated, HCPs are more likely to work closely with transgender women to assure that these women receive appropriate health care services (Dewey, 2008). A study by Bockting, Robinson, Benner, and Scheltema (2004) compared client satisfaction of transgender women and biological females in terms of mental health and sexual health services. Both groups reported a dislike and distrust of the role of the physician as the gatekeeper of care and services, and there were few differences in the level of client satisfaction between the two groups. Transgender women, however, reported more satisfaction with mental health services in terms of group therapy, support groups, and opportunities for networking than did biological females.

Lack of knowledge. Many MTF transgender persons lack adequate knowledge regarding HIV infection or HIV transmission risk factors. This lack of knowledge may be related to the fact that health care for members of this population may be difficult to obtain (Dewey, 2008). As with all encounters with HCPs in the current health care arena, available time for providers to offer client education is minimal. Because MTF transgender persons have limited health care access and few services specifically designed for transgender women, education may be inadequate; thus, transgender women may receive incongruent or conflicting information. Many transgender women have difficulty describing safer sex behaviors because of inadequate or incongruent information received from HCPs (Bockting et al., 1998).

Because MTF transgender persons often do not identify as being gay or homosexual, many believe that they are not at risk for HIV infection. The old misconception that HIV is a "gay disease" may be prevalent in this population. Another misconception among this population, as in the gay community, is that HIV infection is easily treated with medications. The practice of safer sex behaviors is not perceived to be necessary because treatment in the form of antiretroviral medication is available for persons who do become infected (Bockting et al., 1998).

MTF transgender persons who speak English as a second language are at an additional disadvantage with respect to educational programs and services. Much like newly arrived immigrants and individuals who are not fully acculturated into American culture, HCPs who speak the same language as the client population they serve may not be available. This cultural and linguistic incongruence results in health care education being provided only in English and consequently not being fully understood by persons who speak languages other than English as their primary language (Nemoto et al., 2006).

Violence. Violence is a common experience for many MTF transgender persons. Whether violence is physical or sexual in nature, MTF transgender persons are at risk for violence not only when engaging in CSW but also in day-to-day situations. Up to 60% of MTF transgender persons have experienced harassment or violence in their lifetime. Harassment and violence are more common in

younger persons, persons who lack employment, and individuals with lower incomes (Lombardi, Wilchins, Priesing, & Malouf, 2001), indicating that younger and unemployed MTF transgender persons resort to CSW, which increases the risk of harassment and violence and compromises physical safety (Bockting et al., 1998). Some MTF transgender persons have even reported harassment and violence from law enforcement officers (Sausa et al., 2007).

Many MTF transgender persons have reported that violence was common in their family of origin. When an individual expresses the desire to transition from a male to a female, many families verbally condemn the need to transition, which often escalates to physical violence. In retrospect, many MTF transgender persons reported that verbal condemnation and the threat of physical violence led to a lifetime of marginalization (Sausa et al., 2007).

Intimate partner violence is commonly reported by MTF transgender persons. In addition to physical violence, sexual violence often occurs in the form of forced sex with the primary partner as well as being forced to participate in high-risk group sex with the primary partner and others. When involved in relationships in which intimate partner violence is present, it is difficult for transgender women to negotiate safer sex behaviors. In fact, attempts to negotiate safer sex behaviors may increase the risk of verbal, physical, and sexual abuse (Heintz & Melendez, 2006).

Stigma and discrimination. About 40% of MTF transgender persons have experienced significant stigma and discrimination (Lombardi et al., 2001). The stigma and discrimination experienced by these women is reported to be more intense and psychologically damaging than negative reactions that are experienced by gay, lesbian, and bisexual people (Bockting et al., 1998).

In addition to the stigma and discrimination from HCPs as previously discussed, transgender women experience a significant amount of employment-related discrimination. Securing employment is difficult for many MTF transgender persons. Job trainings and work programs for transgender women are nonexistent. Once employed, many transgender women experience workplace discrimination, especially MTF transgender persons who cannot pass for women. MTF transgender persons who can pass as women report more employment options and less discrimination than their unpassable counterparts (Sausa et al., 2007).

The stigma and discrimination experienced by members of this subpopulation of women may be for a variety of reasons. The first is the misconception that transgender persons are responsible for the increased rates of HIV infection in the general population (Bockting et al., 1998). Although high rates of HIV infection have been documented for MTF transgender persons, the sexual partners of transgender women are also at a higher risk for HIV infection and STIs. Along with sexual partners being at risk from unprotected sexual activities with MTF transgender persons, transgender women are equally at risk of HIV infection during unprotected sexual activities with their male sexual partners (Bockting, Miner, & Rosser, 2007). Second, MTF transgender persons are likely to belong to ethnic minority groups. In fact, transgender women who are infected with HIV are most likely to be African American or Hispanic (Clements-Nolle et al., 2001; Nemoto et al., 2004). The stigma and discrimination experienced may be a combination of transgender status and ethnic minority status (Sausa et al, 2007). If HIV infection is added to this equation, stigma and discrimination may be intensified (Bockting et al., 1998).

Mental health issues. Mental health issues such as depression and low self-esteem have an impact on the sexual behaviors of men who have sex with men (De Santis, Colin, Vasquez, & McCain, 2008), another marginalized sexual minority. These relationships have also been noted in MTF transgender persons. Mental health conditions in members of this population are often related to limited family support, ethnic minority status (Garofalo et al., 2006), shame, isolation, fear, and secrecy associated with life as a transgender person (Bockting et al., 1998) but have not been reported to be directly related to HIV infection status (Clements-Nolle et al., 2001, Clements-Nolle, Marx, & Katz, 2006).

Low self-esteem is common among transgender women and often results in high-risk sexual behaviors such as UAI (Clements-Nolle et al., 2006; Clements-Nolle et al., 2008). In addition to self-esteem,

Clements-Nolle et al. (2006) reported that 60% of the 310 transgender participants in their study sample were depressed. Depression is a major mental health concern because depression increases the risk of suicide in members of this population. MTF transgender persons most at risk for suicide were transgender women who were younger than 25 years of age, had a history of alcohol or drug treatment, had a history of sexual abuse, had experienced discrimination and victimization, and had feared for their physical safety (Grossman & D'Augelli, 2006).

The combination of hopelessness and depression results in participation in high risk sexual behaviors (De Santis & Patsdaughter, 2005). Over time, these feelings of hopelessness and depression also increase the risk of suicide. As in the general population, many people who wish to commit suicide do not do so because of the lack of means, courage, or energy. Some MTF transgender persons who lack the resources to commit active suicide may resort to participation in high-risk sexual behaviors; contracting HIV infection provides these women with a passive means of committing suicide (Bockting et al., 1998).

Gender identity could also influence sexual behaviors. As discussed previously, gender identity disorder results in feelings of discomfort with one's biological sex (American Psychological Association, 2000). Once the transition process has begun, some transgender women may engage in sexual experimentation that includes high-risk sexual behaviors. Other transgender women may use sex as an affirmation of their physical attractiveness as a female and engage in high-risk sexual behaviors in an attempt to feel more feminine (Bockting et al., 1998).

Low self-esteem, depression, thoughts of suicide, and gender issues have an impact on the quality of life of transgender women. Compared with biological females, transgender women have reported lower overall and mental health quality of life. Transgender women who were receiving hormone therapy, however, reported quality of life equal to that of biological females (Grossman & D'Augelli, 2004).

HIV Infection Risk Factors Among MTF Persons: State of Knowledge

The review of literature on HIV risk factors in MTF transgender persons presents a number of salient points regarding the current knowledge base of HIV risk factors among members of this population. When HIV was first recognized as an emerging infectious disease in 1981, transgender people were nearly invisible to society. As attitudes toward and acceptance of transgender persons continues to progress, transgender people have become recognized as one of the new faces of HIV infection in the United States (CDC, 2007).

To gain an understanding of HIV risk factors and epidemiological trends in HIV infection rates that impact this subpopulation of women, previous research has focused on providing descriptions of possible risk factors using quantitative and qualitative methodologies. Compared with the general population, relatively little is known about this hard-to-reach group. Changing societal attitudes as well as activism in the transgender community, however, have allowed this group to emerge as a distinct population with unique health care needs as well as unique HIV prevention challenges.

Although each identified factor contributes to risk for HIV infection, studies are lacking that would fill two important gaps in the knowledge base. First, how much does each individual risk factor influence injection practices and sexual behaviors? IDU and unprotected sexual activity both place an individual at risk for HIV infection (CDC, 2007), and it is important to know the extent to which each individual factor influences IDU and/or unprotected sexual activity. Second, for MTF transgender persons, what are the relationships among various risk factors? A considerable amount of research data collected from members of this population provides a description of each of these risk factors separately, and some in combinations, but a study that has examined all of the risk factors in combination is lacking.

There has been a dearth of HIV prevention studies with MTF transgender persons. Only two studies (Bockting, Rosser, & Scheltema, 1999; Nemoto, Operario, Keatley, Nguyen, & Sugano, 2005) could be found that attempted to reduce high-risk behaviors such as drug use and unprotected sexual activity; however, the sample sizes of these studies were relatively small (i.e., $N = 59$ and $N = 109$, respectively). It is currently not known if the reductions in reported high-risk behaviors in either study were longitudinally maintained.

Ethnic minority MTF transgender persons continue to be especially vulnerable to HIV infection. Although studies have documented the vulnerability of minority transgender women to HIV infection (Bockting et al., 1998; Clements-Nolle et al., 2001; Nemoto et al., 2004; Sausa et al., 2007), these research studies have not successfully explained the attitudes, behaviors, or social dynamics that contribute to the increased risk for HIV infection in ethnic minority transgender women.

Implications for Care

Nurses and other HCPs who work with transgender women need to tailor interventions specific to this population. Institutions that provide care for transgender women need to focus on attempts to create "trans friendly" environments. Transgender women have voiced discomfort with receiving care with gay, lesbian, and bisexual clients (Nemoto et al., 2006), and attempts should be made within the confines of the physical environments where health care is delivered to meet the request for separate and specialized services. Creative patient scheduling such as reserving certain days or times for transgender clients separate from gay, lesbian, and bisexual clients may address this concern.

Another method to help make health care institutions more trans friendly is to employ transgender women as peer educators. Peer educators are people living with HIV who are employed to serve as links between clients and HCPs. Employing MTF peer educators in an institution that provides care for members of this population may assist HCPs to provide gender-appropriate care and services for transgender women.

All staff should receive regular trainings on how to provide care for this population. Trainings should include all staff having contact with clients, including nonclinicians such as receptionists and case managers. This education could be provided by peer educators as well as resources from the community, such as inviting transgender clients to discuss transgender health care issues with staff. Information presented at trainings should be reinforced and updated at regular intervals (Sevelius, Keatley, Iñiguez, & Reyes, 2008).

Client education is vital in HIV prevention. Studies have documented that transgender women often lack knowledge regarding HIV transmission (Bockting et al., 1998; Dewey, 2008) and condom negotiation skills (Bockting et al., 1998; Nemoto et al., 2004; Sausa et al., 2007). Education for transgender women should focus on information regarding HIV transmission and should teach them how to safely and effectively negotiate condom use with primary and other sexual partners. As with HCPs, education provided to clients should be regularly reinforced.

Health care provided for this population needs to be multidisciplinary in nature. In addition to nurses and physicians, experts from various disciplines such as psychology, psychiatry, social work, and substance abuse counseling should be consulted to provide care for transgender women as needed. HCPs should offer regular testing or screenings for HIV, STIs, substance abuse, and mental health conditions. Appropriate referrals should be provided for any identified conditions that cannot be addressed or treated at a particular institution (Sevelius et al., 2008).

HCPs need to make an effort to capture transgender persons in their institution's demographic databases. Institutions should restructure demographic intake forms so that clients can self-identify as being transgender as appropriate (Sausa, Sevelius, Keatley, Iñiguez, & Reyes, 2009). This inclusion would provide institutional awareness of the numbers of transgender clients who receive care at the institution. When reporting new cases of HIV infection or STIs, it is important for HCPs to note the client's transgender status. If public health reporting forms do not permit HCPs to select transgender as an option, HCP should attempt to change the data collection and reporting methods of the institution and to present the number of cases to public health departments. These data could draw attention to the issue and may result in a change at the public health department level. Reporting new cases of HIV infection and STIs would allow public health officials to have better estimates of prevalence rates of HIV infection and STIs in this population.

Directions for Future Research

Given the current state of knowledge and HIV prevention interventions within the MTF transgender

community, a number of areas for future research can be identified. As previously noted, more research needs to be conducted with ethnic minority MTF transgender persons to further explore the unique challenges and care needs of these subpopulations of women.

Second, a multisite study, which would enroll large numbers of transgender women, is necessary because the majority of the studies with this population to date have used relatively small samples. Given that recruiting members of this hard-to-reach population is a challenge, multisite data collection would allow researchers to recruit and sample more members of this population and would also increase sample size, increase variability, reduce sampling bias, and permit the use of more powerful, multivariate statistical tests. Thus, more confidence could be placed in study results.

Third, focus groups and other participatory methods should be used so that transgender women can confer with researchers regarding the unique needs of this population. Qualitative along with quantitative data would help researchers develop or tailor intervention programs that could reduce risk behaviors in this population. Mixed methods research would guide researchers as they develop and test intervention programs that are participant-focused and pertinent to the target population.

Summary

Transgender women experience a host of psychosocial issues that may place them at increased risk for HIV infection. Factors including high-risk sexual behaviors, needle sharing and substance abuse, CSW, limited health care access and negative health care encounters, lack of knowledge regarding HIV infection and transmission, violence, stigma and discrimination, and mental health issues have been identified in the literature as risk factors for acquisition of HIV infection by members of this population. Tailoring assessment skills and interventions for members of this population is imperative in addressing the high rates of HIV infection among MTF transgender persons.

Clinical Considerations

- MTF transgender persons are at risk for HIV infection related to a host of psychosocial factors that influence needle sharing/substance abuse and high-risk sexual behaviors.
- Nurses and other HCPs who work with members of this population should screen for substance abuse disorders and mental health conditions as well as HIV and STIs.
- Nurses and other HCPs need to structure the health care environment to be more "trans friendly" to provide appropriate care.
- The complex, interconnected relationships among risk factors for HIV infection in this population need to be taken into account when providing care and designing interventions for transgender women.
- HIV prevention interventions targeted to this population must take into account the various psychosocial issues that influence needle sharing/substance abuse and high-risk sexual behaviors.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Beck, E. J., Mandalia, S., Leonard, K., Griffith, R. J., Harris, J. R. W., & Miller, D. L. (1996). Case control study of sexually transmitted infections as cofactors for HIV-1 transmission. *International Journal of Sexually Transmitted Infections & AIDS*, *7*, 34-38.

Bockting, W., Miner, M., & Rosser, B. R. S. (2007). Latino men's sexual behavior with transgender persons. *Archives of Sexual Behavior*, *36*, 778-786.

Bockting, W., Robinson, B., Benner, A., & Scheltema, K. (2004). Patient satisfaction with transgender health services. *Journal of Sex & Marital Therapy*, *30*, 277-294.

Bockting, W. O., Robinson, B. E., & Rosser, B. R. S. (1998). Transgender HIV prevention: A qualitative needs assessment. *AIDS Care*, *10*, 505-526.

Bockting, W. O., Rosser, B. R. S., & Scheltema, K. (1999). Transgender HIV prevention: Implementation and evaluation of a workshop. *Health Education Research*, *14*, 177-183.

Centers for Disease Control and Prevention. (2007). *HIV/AIDS and transgender persons*. Retrieved May 23, 2009, from http://www.cdc.gov/lgbthealth/pdf/FS-Transgender-06192007.pdf

Clements-Nolle, K., Guzman, R., & Harris, S. G. (2008). Sex trade in a male-to-female transgender population: Psychosocial correlates of inconsistent condom use. *Sexual Health*, *5*, 49-54.

Clements-Nolle, K., Marx, R., Guzman, R., & Katz, M. (2001). HIV prevalence, risk behaviors, healthcare use, and mental health status of transgender persons: Implications for public health interventions. *American Journal of Public Health*, *91*, 915-921.

Clements-Nolle, K., Marx, R., & Katz, M. (2006). Attempted suicide among transgender persons: The influence of gender-based discrimination and victimization. *Journal of Homosexuality*, *51*, 53-69.

Cohan, D., Lutnick, A., Davidson, P., Cloniger, C., Herlyn, A., Breyer, J., et al. (2006). Sex worker health: San Francisco style. *Sexually Transmitted Infections*, *82*, 418-422.

De Santis, J. P., Colin, J. M., Vasquez, E. P., & McCain, C. G. (2008). The relationship of depressive symptoms, self-esteem, and sexual behaviors in a predominately Hispanic sample of men who have sex with men. *American Journal of Men's Health*, *2*, 314-321.

De Santis, J. P., & Patsdaughter, C. A. (2005). HIV/AIDS: A changing course. *Advance for Nurse Practitioners*, *13*, 47-48, 50.

Dewey, J. M. (2008). Knowledge legitimacy: How trans-patient behavior supports and challenges current medical knowledge. *Qualitative Health Research*, *18*, 1345-1355.

Edwards, J. W., Fisher, D. G., & Reynolds, G. L. (2007). Male-to-female transgender and transsexual clients of HIV service programs in Los Angeles County, California. *American Journal of Public Health*, *97*, 1030-1033.

Garofalo, R., Deleon, J., Osmer, E., Doll, M., & Harper, G. W. (2006). Overlooked, misunderstood, and at-risk: Exploring the lives and HIV risk of minority male-to-female transgender youth. *Journal of Adolescent Health*, *38*, 230-236.

Grossman, A. H., & D'Augelli, A. R. (2004). Transgender youth: Invisible and vulnerable. *Journal of Homosexuality*, *51*, 111-128.

Heintz, A. J., & Melendez, R. M. (2006). Intimate partner violence and HIV/STD risk among lesbian, gay, bisexual, and transgender individuals. *Journal of Interpersonal Violence*, *21*, 193-208.

Kenagy, G. P., & Hsieh, C. M. (2005). The risk less known: Female-to-male transgender persons' vulnerability to HIV infection. *AIDS Care*, *17*, 195-207.

Lombardi, E. L., Wilchins, R. A., Priesing, D., & Malouf, D. (2001). Gender violence: Transgender experiences with violence and discrimination. *Journal of Homosexuality*, *42*, 89-101.

Morgan, S. W., & Stevens, P. E. (2008). Transgender identity development as represented by a group of female-to-male transgendered adults. *Issues in Mental Health Nursing*, *29*, 585-599.

National Institutes of Drug Abuse. (2006). *Research report series, HIV/AIDS: How does drug abuse impact the HIV/AIDS epidemic* (NIH publication 06–5760). Retrieved May 20, 2009, from http://www.drugabuse.gov/PDF/RRhiv.pdf

Nemoto, T., Operario, D., & Keatley, J. (2006). Need for HIV/AIDS education and intervention for MFT transgenders: Responding to the challenge. *Journal of Homosexuality*, *51*, 183-201.

Nemoto, T., Operario, D., Keatley, J., Han, L., & Soma, T. (2004). HIV risk behaviors among male-to-female transgender persons of color in San Francisco. *American Journal of Public Health*, *94*, 1193-1199.

Nemoto, T., Operario, D., Keatley, J., Nguyen, H., & Sugano, E. (2005). Promoting health for transgender women: Transgender Resources and Neighborhood Space (TRANS) Program in San Francisco. *American Journal of Public Health*, *95*, 382-384.

Newfield, E., Hart, S., Dibble, S., & Kohler, L. (2006). Female-to-male transgender quality of life. *Quality of Life Research*, *15*, 1447-1457.

Sadock, B. J., & Sadock, V. A. (2004). *Kaplan & Sadock's concise textbook of clinical psychiatry* (2nd ed.). Philadelphia, PA: Lippincott, Williams, & Wilkins.

Sausa, L. A., Keatley, J., & Operario, D. (2007). Perceived risks and benefits of sex work among transgender women of color in San Francisco. *Archives of Sexual Behavior*, *36*, 768-777.

Sausa, L.A., Sevelius, J., Keatley, J., Iñiguez, J.R., & Reyes, M. (2009). *Policy recommendations for inclusive data collection of trans people in HIV prevention, care, & services*. Center of Excellence for Transgender HIV Prevention: University of California, San Francisco. Retrieved May 23, 3009, from http://www.transhealth.ucsf.edu/pdf/data-recommendation.pdf

Schulden, J. D., Song, B., Barros, A., Mares-DelGrasso, A., Martin, C. W., Ramirez, R., et al. (2008). Rapid HIV testing in transgender communities by community-based organizations in three cities. *Public Health Reports*, *123*(Suppl. 3), 101-123.

Sevelius, J., Keatley, J., Iñiguez, J.R., & Reyes, E.M. (2008) *Serving transgender people in California: Assessing progress, advancing excellence*. Center of Excellence for Transgender HIV Prevention: University of California San Francisco. Retrieved May 23, 2009, fromhttp://coetranshealth.org/pdf/serving-trans-ca.pdf

Weinberg, M. S., Shaver, F. M., & Williams, C. J. (1999). Gendered sex work in the San Francisco Tenderloin. *Archives of Sexual Behavior*, *28*, 503-521.